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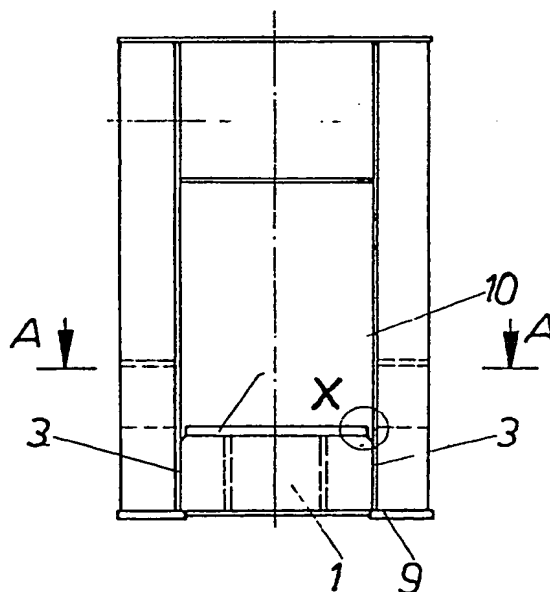
(56) Documents cited
None

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B3A
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B3W
B5F
Selected US specifications from IPC sub-class B30B

(54) An improved press

(57) A press for pressing metal sheets consists of a pair of upstanding columns including facing plates 3. A table 10 between the columns is welded to two generally U-shaped table supports comprising a portion 1 spanning the space between the plates 3 and upstanding portions (2, Figure 3) which extend through openings in the plates 3. The portions 1 are welded to the plates 3 by welds (4, 5, Figure 5) and the upstanding portions (2) and welded by welds (6, 7) to the plates 3.

Fig. 1



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Fig. 1

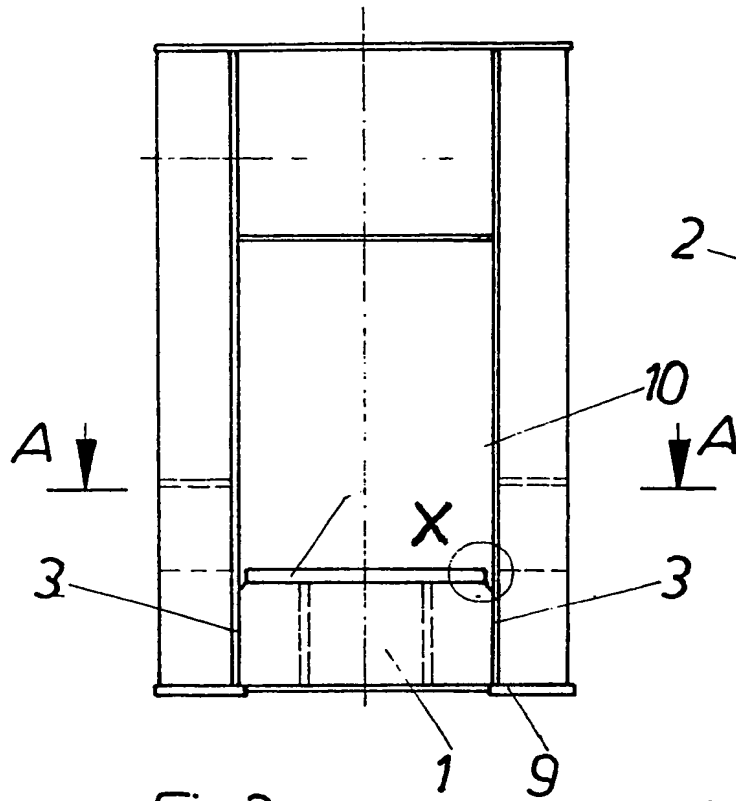


Fig. 2

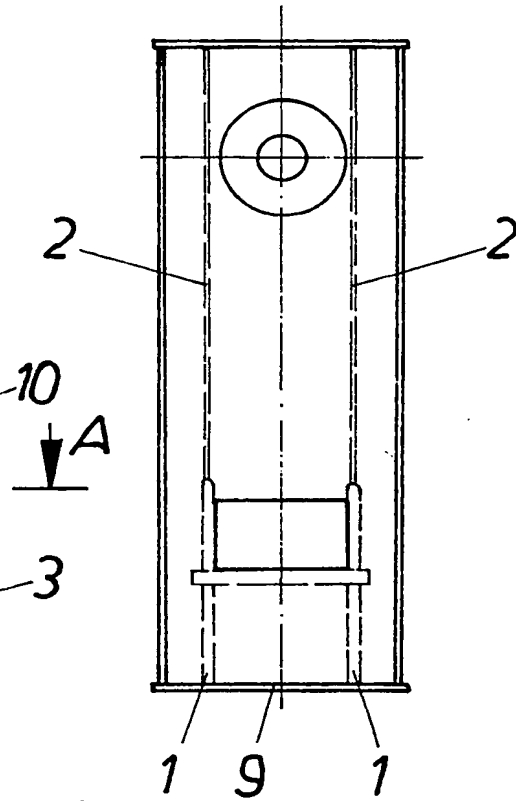


Fig. 3

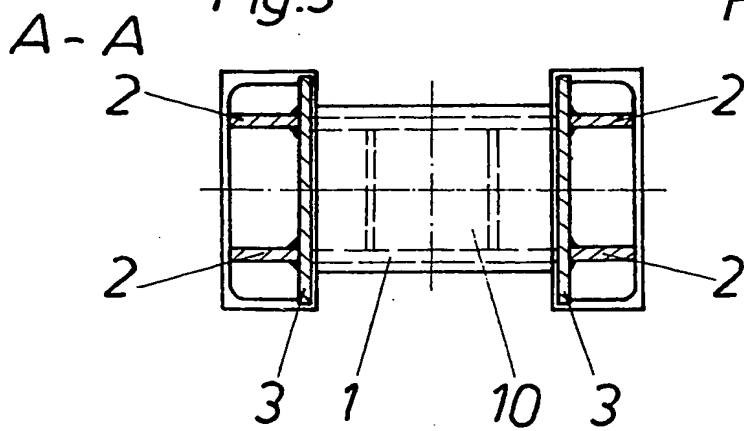


Fig. 4

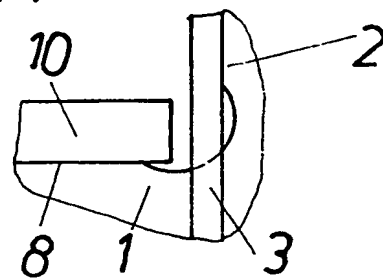
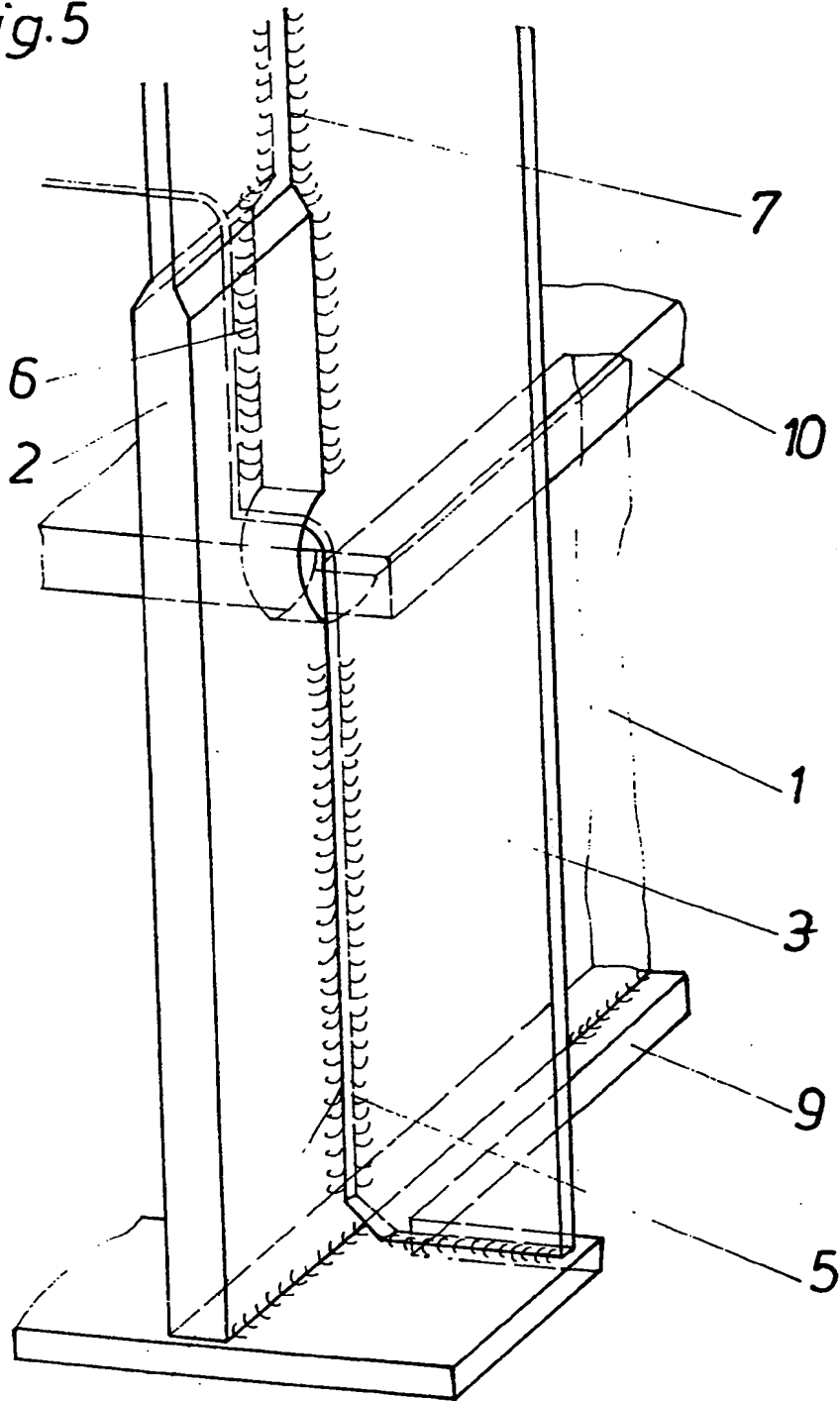


Fig.5



SPECIFICATION

An improved press

- 5 This invention relates to a press eg for pressing sheets of metal.

It is known to provide a press for pressing sheets of metal, which consists of two parallel columns each including an upright metal plate, between
10 which is arranged a tool that presses down onto a table. The table is welded to the upright plates and is supported by support plates also welded onto the upright plates. All the welds are on the facing surfaces of the upright plates. The welds need to
15 be of ample size to accommodate the stress applied when the press is operated but the radii of curvature for the weld transition between the table weld and the support plate weld is nevertheless small.

- 20 The prior design suffers from the serious drawback that high intrinsic stresses occur in the welds and can only conveniently be reduced by the stress-annealing of the entire welded body. Also the small transition radii in the highly stressed
25 zones cause high operating stresses. These high operating stresses necessitate extra dimensional allowances in the sheet-metal parts situated in this zone, failing which breakage will occur as a result of a notching effect.

- 30 The bulky press structure thus requires a large annealing furnace and possibly transport to and from the latter.

A further known means of ensuring a high degree of rigidity in the press is to weld sections
35 onto the outwardly facing surfaces of the upright plates. This variant, however, does not overcome the aforementioned serious drawbacks.

- With a view to overcoming these disadvantages the present invention provides a press including
40 spaced apart columns and a table therebetween, the columns including facing upstanding plates, a table between the columns, the table being supported by at least one table support including a portion spanning the space between said plates,
45 said support further including upstanding portions at opposite ends thereof welded to respective ones of the plates.

The invention will be explained in greater detail by reference to an example shown in the accompanying drawings wherein:
50

Figure 1 is a schematic front view of a press.

Figure 2 is a schematic side view of the press.

Figure 3 is a section along the line A-A of *Figure*

1.

- 55 *Figure 4* shows the detail "x" of *Figure 1* and *Figure 5* is a schematic diagram of how the plates of the lateral stands and the supports of the table extend over and grip one another.

The press consists of two upstanding columns
60 having facing vertically disposed stand plates 3 welded onto a base plate 9. At the top of the columns is mounted a pressing tool which will not be described in detail. A table 10 bridges the space between the columns at the bottom thereof. The
65 table 10 is welded onto two generally U-shaped ta-

- ble support plates consisting of a table support portion 1 extending between the columns and vertically extending leg portions 2. The legs 2 pass through the gate-shaped openings in the stand plates 3 and abut the opposed surfaces of the plates i.e. the surfaces thereof interiorly of the columns. The table support portions 1 are connected to the plates 3 by welds 4, 5, while the legs 2 are connected to the plates 3 via welds 6, 7. The transition between the table support portions 1 and the leg portions 2 has large radii (*Figure 4*) and is constructed without a welded seam, so that no abnormal stresses can occur under operating conditions and the strength of the basic material is in no way reduced. The table surface 10 is welded onto the table supports 1 and is not connected to the plates 3. Due to the welded construction according to the invention and to the resulting possibility of producing welded seams of small cross section it is no longer necessary for the entire press structure to be stress-annealed.

Thus, by means of the invention the table is mounted in a durable and stable manner with reduced use of materials thereby minimising production costs.

CLAIMS

1. A press including spaced apart columns and
95 a table therebetween, the columns including facing upstanding plates, a table between the columns, the table being supported by at least one table support including a portion spanning the space between said plates, said support further including
100 upstanding portions at opposite ends thereof welded to respective ones of the plates.

2. A press according to claim 1 wherein the plates have openings therein through which the table supports extend, said spanning portion of the support being welded to the plates at said openings.

3. A press according to claim 1 or 2 wherein the table is welded to the table support but not to the upstanding plates.

4. A press according to any preceding claim including a pair of said table supports.

5. A press according to any preceding claim wherein the or each said table support is U-shaped.

6. A press substantially as herein described with reference to the accompanying drawings.